

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note: Read Instructions before completing form.

I. A. Applicant/Recipient (Name, Address, City, State, Zip Code)

Name:

Address:

City:

State: Zip Code:

B. DUNS No.

II. Is the applicant currently receiving EPA Assistance? ☒ Yes ☐ No

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective actions taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3))

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below.

☐ Yes ☒ No

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).

☐ Yes ☐ No

b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable by persons with disabilities, explain how a regulatory exception (40 C.F.R. 7.70) applies.

VII. Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex, age, or disability in its program or activities? (40 C.F.R. 5.140 and 7.95)

☒ Yes ☐ No

a. Do the methods of notice accommodate those with impaired vision or hearing?

☒ Yes ☐ No

b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communications?

☒ Yes ☐ No

c. Does the notice identify a designated civil rights coordinator?

☒ Yes ☐ No

VIII. Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. 7.85(a))

☒ Yes ☐ No

IX. Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166)

☒ Yes ☐ No

- X. If the applicant is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator.**

Carla Gonzalez, HR Director
14515 S. Veterans Drive, Somerton, AZ 85350
Email: Gonzalezc@cocopah.com, Phone: 928-722-7458

- XI. If the applicant is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet Address for, or a copy of, the procedures.**

Copy of procedures will be attached to submission.

For the Applicant/Recipient

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official

Jennifer Alspach

B. Title of Authorized Official

Chairwoman

C. Date

03/25/2022

For the U.S. Environmental Protection Agency

I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preaward compliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisions of 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statutes and EPA regulations.

A. *Signature of Authorized EPA Official

B. Title of Authorized Official

C. Date

*** See Instructions**

Instructions for EPA FORM 4700-4 (Rev. 06/2014)

General. Recipients of Federal financial assistance from the U.S. Environmental Protection Agency must comply with the following statutes and regulations.

Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment). Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities. Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities. The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission. Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution. 40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972. 40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973. The Executive Order 13166 (E.O. 13166) entitled; "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items "Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by 40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed. "Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability. Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission. If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable." In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification. * Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.



EPA KEY CONTACTS FORM

OMB Number: 2030-0020
Expiration Date: 06/30/2024

Authorized Representative: *Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.*

Name:	Prefix:	<input type="text"/>	First Name:	<input type="text" value="Sherry"/>	Middle Name:	<input type="text"/>
	Last Name:	<input type="text" value="Cordova"/>			Suffix:	<input type="text"/>
Title:	<input type="text" value="Chairwoman"/>					
Complete Address:						
	Street1:	<input type="text" value="14515 S. Veterans Drive"/>				
	Street2:	<input type="text"/>				
	City:	<input type="text" value="Somerton"/>	State:	<input type="text" value="AZ: Arizona"/>		
	Zip / Postal Code:	<input type="text" value="853507001"/>	Country:	<input type="text" value="USA: UNITED STATES"/>		
Phone Number:	<input type="text" value="9286272102"/>		Fax Number:	<input type="text"/>		
E-mail Address:	<input type="text" value="cocotcsec@cocopah.com"/>					

Payee: *Individual authorized to accept payments.*

Name:	Prefix:	<input type="text"/>	First Name:	<input type="text" value="Mario"/>	Middle Name:	<input type="text"/>
	Last Name:	<input type="text" value="Rodriguez"/>			Suffix:	<input type="text"/>
Title:	<input type="text" value="Finance Director"/>					
Complete Address:						
	Street1:	<input type="text" value="14515 S. Veterans Drive"/>				
	Street2:	<input type="text"/>				
	City:	<input type="text" value="Somerton"/>	State:	<input type="text" value="AZ: Arizona"/>		
	Zip / Postal Code:	<input type="text" value="853507001"/>	Country:	<input type="text" value="USA: UNITED STATES"/>		
Phone Number:	<input type="text" value="9286272102"/>		Fax Number:	<input type="text"/>		
E-mail Address:	<input type="text" value="rodriguezr@cocopah.com"/>					

Administrative Contact: *Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, rebudgeting requests etc).*

Name:	Prefix:	<input type="text"/>	First Name:	<input type="text" value="Elizabeth"/>	Middle Name:	<input type="text"/>
	Last Name:	<input type="text" value="Benitez"/>			Suffix:	<input type="text"/>
Title:	<input type="text" value="Tribal Administrator"/>					
Complete Address:						
	Street1:	<input type="text" value="14515 S. Veterans Drive"/>				
	Street2:	<input type="text"/>				
	City:	<input type="text" value="Somerton"/>	State:	<input type="text" value="AZ: Arizona"/>		
	Zip / Postal Code:	<input type="text" value="853507001"/>	Country:	<input type="text" value="USA: UNITED STATES"/>		
Phone Number:	<input type="text" value="9286272102"/>		Fax Number:	<input type="text"/>		
E-mail Address:	<input type="text" value="beniteze@cocopah.com"/>					

EPA KEY CONTACTS FORM

Project Manager: *Individual responsible for the technical completion of the proposed work.*

Name: **Prefix:** **First Name:** **Middle Name:**

Last Name: **Suffix:**

Title:

Complete Address:

Street1:

Street2:

City:

State:

Zip / Postal Code:

Country:

Phone Number:

Fax Number:

E-mail Address:

Other Attachment File(s)

* Mandatory Other Attachment Filename:

Add Mandatory Other Attachment

Delete Mandatory Other Attachment

View Mandatory Other Attachment

To add more "Other Attachment" attachments, please use the attachment buttons below.

Add Optional Other Attachment

Delete Optional Other Attachment

View Optional Other Attachment

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2022

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Enhanced Air Quality Monitoring for Communities	66.034	\$	\$	181,429.00	\$	181,429.00
2.						
3.						
4.						
5. Totals		\$	\$	181,429.00	\$	181,429.00

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SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
	Enhanced Air Quality Monitoring for Communities				
a. Personnel	\$ 35,360.00	\$	\$	\$	\$ 35,360.00
b. Fringe Benefits	17,000.00				17,000.00
c. Travel	0.00				0.00
d. Equipment	105,889.00				105,889.00
e. Supplies	21,900.00				21,900.00
f. Contractual	0.00				0.00
g. Construction	0.00				0.00
h. Other	4,880.00				4,880.00
i. Total Direct Charges (sum of 6a-6h)	185,029.00				\$ 185,029.00
j. Indirect Charges					\$
k. TOTALS (sum of 6i and 6j)	\$ 185,029.00	\$	\$	\$	\$ 185,029.00
7. Program Income	\$	\$	\$	\$	\$

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SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program		(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8.	Enhanced Air Quality Monitoring for Communities	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
9.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
10.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
11.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12. TOTAL (sum of lines 8-11)		\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>

SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ <input type="text" value="185,029.00"/>	\$ <input type="text" value="46,258.00"/>	\$ <input type="text" value="46,257.00"/>	\$ <input type="text" value="46,257.00"/>	\$ <input type="text" value="46,257.00"/>
14. Non-Federal	\$ <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
15. TOTAL (sum of lines 13 and 14)	\$ <input type="text" value="185,029.00"/>	\$ <input type="text" value="46,258.00"/>	\$ <input type="text" value="46,257.00"/>	\$ <input type="text" value="46,257.00"/>	\$ <input type="text" value="46,257.00"/>

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program		FUTURE FUNDING PERIODS (YEARS)			
		(b)First	(c) Second	(d) Third	(e) Fourth
16.	Enhanced Air Quality Monitoring for Communities	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
17.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
18.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
19.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
20. TOTAL (sum of lines 16 - 19)		\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>

SECTION F - OTHER BUDGET INFORMATION	
21. Direct Charges: <input type="text"/>	22. Indirect Charges: <input type="text"/>
23. Remarks: <input type="text"/>	

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Project Narrative File(s)

* **Mandatory Project Narrative File Filename:**

Add Mandatory Project Narrative File

Delete Mandatory Project Narrative File

View Mandatory Project Narrative File

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File

Delete Optional Project Narrative File

View Optional Project Narrative File

Application for Federal Assistance SF-424

* 1. Type of Submission:

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

* 2. Type of Application:

- ☒ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

03/25/2022

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

Cocopah Indian Tribe

* b. Employer/Taxpayer Identification Number (EIN/TIN):

86-0255690

* c. Organizational DUNS:

0744895270000

d. Address:

* Street1:

14515 S. Veterans Drive

Street2:

* City:

Somerton

County/Parish:

* State:

AZ: Arizona

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

853507001

e. Organizational Unit:

Department Name:

Environmental Protection Offic

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

* First Name:

Jennifer

Middle Name:

* Last Name:

Alspach

Suffix:

Title:

Environmental Protection Office Director

Organizational Affiliation:

* Telephone Number:

9286272025

Fax Number:

* Email:

alspachj@cocopah.com

Application for Federal Assistance SF-424

* 9. Type of Applicant 1: Select Applicant Type:

I: Indian/Native American Tribal Government (Federally Recognized)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.034

CFDA Title:

Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities
Relating to the Clean Air Act

* 12. Funding Opportunity Number:

EPA-OAR-OAQPS-22-01

* Title:

Enhanced Air Quality Monitoring for Communities

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

Establish Long Term Air Quality Monitoring Capacity at the Cocopah Indian Tribe

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:**

* a. Applicant

7

* b. Program/Project

7

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date:

12/01/2022

* b. End Date:

10/31/2024

18. Estimated Funding (\$):

* a. Federal	185,029.00
* b. Applicant	0.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	185,029.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**☐ a. This application was made available to the State under the Executive Order 12372 Process for review on ☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.☒ c. Program is not covered by E.O. 12372.*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes☒ No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:

* First Name:

Sherry

Middle Name:

* Last Name:

Cordova

Suffix:

* Title:

Chairwoman

* Telephone Number:

9286272102

Fax Number:

* Email:

cocotcsec@cocopah.com

* Signature of Authorized Representative:

Jennifer Alspach

* Date Signed:

03/25/2022

March 24, 2022

Jen Alspach, Director
Environmental Protection Office
Cocopah Indian Tribe
14515 S. Veteran's Drive
Somerton, AZ 85350

Dear Ms. Alspach:

I am writing to enthusiastically support your proposed project, "Establishing Long Term Air Quality Monitoring Capacity at the Cocopah Indian Tribe", for submission to the Enhanced Air Quality Monitoring for Communities proposal call (RFA Number: EPA-OAR-OAQPS-22-01). The proposed project is an important part of building capacity for the Cocopah Tribe in monitoring your air quality using state of the art equipment. I have followed the partnership between Northern Arizona University (NAU) and the Cocopah Tribe has been strengthening over the past few years.

The mission of the Institute for Tribal Environmental Professionals (ITEP), based at Northern Arizona University (NAU) in Flagstaff, Arizona, is to strengthen tribal capacity and sovereignty in environmental and natural resource management through culturally responsive education, research, partnerships, and policy-based services. ITEP's programs provide a variety of educational and training tools to help the 574 federally-recognized tribes that ITEP serves to attain a healthy environment.

As the Program Manager for the Tribal Environmental Education Outreach Program within the Institute for Tribal Environmental Professionals (ITEP), I have seen the need in Indian Country for the study you are proposing. I have also appreciated our collaborative work with environmental health studies involving Native American students. The summer 2021 internship of Jonathan Credo (a collaborator on this proposal) with the Cocopah Tribe is a great example of partnering with ITEP to provide important air quality information to a tribal community. I support continued collaborations to investigate air quality on Cocopah Tribal Lands with respect to exposures from agriculture and other industrial sources. I believe these collaborations not only provide important information to the tribe, but they also provide an important research training experience to Native American students. I agree to collaborate with you and your research team as in investigating air quality of the Cocopah Tribal HeadStart and Day Care.

Sincerely,



Mansel A. Nelson
Program Manager
Tribal Environmental Education Outreach Program

Biographical Sketch
Jani C. Ingram, Ph.D.

Professional Preparation

Yavapai College	General Transfer	AA 1982
New Mexico State University	Chemistry (mathematics minor)	BS 1985
University of Arizona	Chemistry	PhD 1990

Professional Appointments

Northern Arizona University

Regents' Professor, Chemistry & Biochemistry	2021 - present
Professor, Chemistry & Biochemistry	2015-2021
Associate Professor, Chemistry & Biochemistry	2002-2015

Idaho National Laboratory

Advisory Scientist	1998-2002
Staff Scientist	1992-1998
Scientist	1990-1992

University of Arizona

Teaching Assistant, Chemistry Department	1985-1986
Research Assistant, Chemistry Department	1986-1990

AT&T Bell Laboratories

Research Assistant	1985
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New Mexico State University

Research Assistant, Chemistry Department	1984-1985
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Los Alamos National Laboratory

Research Assistant (summers)	1983 & 1984
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Relevant Publications

“Sample preparation method for metal(loid) contaminant quantitation in rodent hair collected in Yuma County, Arizona”, J. Credo, A. Chandos, C. Checinski, F. A. von Hippel, J. C. Ingram, Environmental Monitoring and Assessment, **2021**, 193, 522-531, doi.org/10.1007/s10661-021-09292-8

“Dissolved Uranium and Arsenic in Unregulated Groundwater Sources – Western Navajo Nation”, L. Jones, J. Credo, R. Parnell, J.C. Ingram, Journal of Contemporary Water Research & Education, 169, **2020**, 27-43.

“Traditional Ecological Knowledge Policy Considerations for Abandoned Uranium Mines on Navajo Nation”, T. Rock and J.C. Ingram, Human Biology, 92, **2020**, 1-8.

“Traditional Sheep Consumption by Navajo People in Cameron, Arizona”, T. Rock, R. Camplain, N.I. Teufel-Shone, J. C. Ingram, International Journal of Environmental Research and Public Health, 16, **2019**, 4195, doi:10.3390/ijerph16214195.

“Quantification of Elemental Contaminants in Unregulated Water across Western Navajo Nation”, J. Credo, J. Torkelson, T. Rock, J. C. Ingram, *International Journal of Environmental Research and Public Health*, 16, **2019**, 2727, doi:10.3390/ijerph16152727.

“Characterization of $^{234}\text{U}/^{238}\text{U}$ Activity Ratios and Potential Inorganic Uranium Complexation Species in Unregulated Water Sources in the Southwest Region of the Navajo Reservation”, N. R. Campbell and J. C. Ingram, in *Water Reclamation and Sustainability*, Ed. S. Ahuja, Elsevier, **2014**, pg 79-97.

Other Significant Products

“Arsenic Concentrations in Ground and Surface Waters across Arizona Including Native Lands”, M.C. Jones, J.M. Credo, J.C. Ingram, J.A. Baldwin, R.T. Trotter, Jr., C.R. Propper, *Journal of Contemporary Water Research & Education*, 169, **2020**, 44-60.

“NACP: Partnership for Native American Cancer Prevention”, F.C. Gachupin, J.C. Ingram, K.A. Laurila, M. C. Lloria-Prevatt, N.I. Teufel-Shone, M.M. Briehl, *Cancer Health Disparities*, 4, **2020**, e1-e6 (doi:10.9777/chd.2020.1002).


“Establishing Relationships and Partnerships to Engage Native American Students in Research”, J. C. Ingram, in *Broadening Participation in Undergraduate Research: Fostering Excellence and Enhancing the Impact*, eds. M. Boyd and J. Wesemann, publishers Council on Undergraduate Research, **2009**, pg. 269-280.

Synergistic Activities:

- Principal Investigator for project entitled “Bridging Arizona Native American Students to Bachelor’s Degrees”, National Institute of General Medical Sciences: this program is focused on recruiting, training, and transitioning Native American students from 2-year institutions to 4-year institutions.
- Principal Investigator of “Health and Wellbeing Impact of Contamination of Traditional Foods and Water on Navajo”, National Institute of Environmental Health, and of “Environmental Uranium Exposure of Sheep Living Around Mining Sites on Navajo”, National Institute of Health Native American Research Centers for Health: these projects involve working with Native American students and communities.
- Principal Investigator of “Cove Livestock Project”, United State Environmental Protection Agency: this project involves working with the Navajo Community of Cove investigating contamination of their livestock due to legacy mining.
- Principal Investigator for the program entitled “Partnership for Native American Cancer Prevention” funded by the National Cancer Institute: this program involves research, training, and outreach with Native American faculty, students, staff, and communities focused on cancer health disparities in Native American communities.
- Principal Investigator of “Indigenous Ethics in STEM”, National Science Foundation: this project involves investigating cultural/ethical/spiritual barriers of Indigenous students and professionals in STEM disciplines.
- Mentor for Northern Arizona University’s NSF-sponsored Research Experiences for Undergraduates, NSF’s Undergraduate Research Mentoring, NSF Tribal College and University interns, NIH’s Initiative to Maximize Student Development, and NIH’s Bridges to Baccalaureate summer research programs.

Jennifer Alspach

United States

 jennyhelena94@gmail.com

 linkedin.com/in/jhalspach

Summary

Dedicated environmental professional with 5 years of mixed experience in atmospheric research and building environmental protection programs. Successful grant writer and program manager. Increased environmental program funding by 175% for a small Native American tribe in Arizona. Driven by meaningful work that positively impacts the environment and communities.

Experience

Environmental Protection Office Director

Cocopah Indian Tribe

May 2020 - Present (1 year 9 months +)

Oversee the day to day operations of the Environmental Protection Office; direct the tribe's environmental grants and programs including environmental restoration, air quality, water quality, vector surveillance, waste management, and environmental health research; manage associated budgets; coordinate all work plan activities; complete grant reporting; secure new funding opportunities for the tribe; ensure environmental compliance on tribal lands; provide environmental outreach to the tribal community

Graduate Research Assistant

Geophysical Institute

Aug 2017 - Dec 2019 (2 years 5 months)

Operated lidar (laser radar) systems to study the Arctic middle atmosphere at Poker Flat Research Range; participated in NASA's SuperSoaker rocket investigation; assisted in the installation of new lidar systems and maintenance of existing lidar systems; processed and analyzed lidar data; developed IDL programs to read, process, and analyze both lidar and satellite data; presented research at three international science conferences; gave laboratory tours to government scientists and the public

Research Assistant

Duke Department of Biology- Duke Herbarium

Aug 2016 - May 2017 (10 months)

provided georeferencing data for thousands of lichen specimens collected throughout the United States as part of the NSF funded North American Lichens and Bryophytes: Sensitive Indicators of Environmental Quality and Change project

Education

University of Alaska Fairbanks

Master of Science - MS, Atmospheric sciences

2017 - 2020

M.S. thesis: "Lidar and Satellite Studies of Noctilucent Clouds over Alaska"



Duke University

Bachelor of Science (BS), Earth and ocean sciences

2013 - 2017

Minor in Creative Writing

Skills

Grant Writing • Grant Administration • Program Management • Environmental Awareness • Budget Management • Event Planning • Editing • Atmospheric Science

Manifest for Grant Application # GRANT13580600

Grant Application XML file (total 1):

1. GrantApplication.xml. (size 23981 bytes)

Forms Included in Zip File(total 6):

1. Form ProjectNarrativeAttachments_1_2-V1.2.pdf (size 16138 bytes)

2. Form SF424_3_0-V3.0.pdf (size 24084 bytes)

3. Form SF424A-V1.0.pdf (size 22706 bytes)

4. Form EPA4700_4_3_0-V3.0.pdf (size 22724 bytes)

5. Form OtherNarrativeAttachments_1_2-V1.2.pdf (size 15911 bytes)

6. Form EPA_KeyContacts_2_0-V2.0.pdf (size 37383 bytes)

Attachments Included in Zip File (total 6):

1. ProjectNarrativeAttachments_1_2 ProjectNarrativeAttachments_1_2-Attachments-1234-Cocopah_Enhanced Air Monitoring 2022.pdf application/pdf (size 459888 bytes)

2. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1239-Quality Assurance Statement.pdf application/pdf (size 108057 bytes)

3. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1235-Letter of Support NAU March 2022.pdf application/pdf (size 398855 bytes)

4. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1236-Letter of Support ITEP March 2022.pdf application/pdf (size 177214 bytes)

5. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1238-Biosketch Ingram 2021.pdf application/pdf (size 155233 bytes)

6. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1237-Alspach_Resume-2022.pdf application/pdf (size 81781 bytes)

Section 5- Quality Assurance Statement

The Cocopah Indian Tribe intends to carry out the proposed work under this potential agreement with a quality assurance system commensurate with the degree of confidence needed for airborne data operations. Jen Alspach, Cocopah Environmental Protection Office Director and Project Manager, will be responsible for quality assurance and quality control aspects of the project. Alspach will be overseeing the project activities and serve as the tribal leader coordinating with partners at Northern Arizona University (NAU) and the Institute for Environmental Professionals (ITEP). The Tribe will work with their research partners to develop adequate quality assurance project plans (QAPP) and sampling plans for approval by the EPA. Funding for air quality monitoring QAPP development was included in the tribe's EPA FY 23 General Assistance Program (GAP) workplan and budget. The Tribe has experience developing QAPP's and has an approved QAPP for water quality monitoring under their EPA CWA Water Pollution Control Grant.

The NAU Research team led by Jani Ingram will assist the tribe in creating the necessary air quality QAPP and sampling plans. These plans will include quality control measures and practices including all necessary instrument calibration and performance tests which shall be performed as recommended throughout the project period. The instruments being deployed in this project meet requirement for air sampling as dictated by EPA. Quality assurance and control activities will be documented and submitted to EPA along with the performance reports.

Department of Chemistry and Biochemistry

March 18, 2022

Jen Alspach, Director
Environmental Protection Office
Cocopah Indian Tribe
14515 S. Veteran's Drive
Somerton, AZ 85350

Dear Ms. Alspach,

I am writing to enthusiastically support your proposed project, "Establishing Long Term Air Quality Monitoring Capacity at the Cocopah Indian Tribe", for submission to the Enhanced Air Quality Monitoring for Communities proposal call (RFA Number: EPA-OAR-OAQPS-22-01). The proposed project is an important part of building capacity for the Cocopah Tribe in monitoring your air quality using state of the art equipment.

The partnership between Northern Arizona University (NAU) and the Cocopah Tribe has been strengthening over the past few years through the Community-Campus Partnership Support provided by NAU's Southwest Health Equity Research Collaborative. The support provided funding for my environmental analytical chemistry research team to meet on a regular basis with you and other Cocopah leaders. These meetings allowed our research team to better understand environmental concerns of the tribe, and how we could work together to address these concerns. An outcome of these meetings was a Memorandum of Understanding between NAU and the Cocopah Tribe to facilitate and support the existence and operation of a collaborative research program in environmental health. Last summer, we were able to secure a summer intern, Jonathan Credo, through the Institute of Environmental Tribal Professionals, to collect preliminary air quality data on Cocopah Lands. These data were useful in developing a proposal, "Air and water assessment of Cocopah Tribal HeadStart and Day Care", submitted to the U. S. Environmental Protection Agency funding opportunity EPA-OA-OCHP-21-01, Children's Healthy Learning Environments in Low-Income and/or Minority Communities. The proposal was selected for funding, and the project will be initiated in May 2022.

Our team at NAU will support you and your colleagues with the Cocopah Tribe in your proposed project to build air quality monitoring capacity in parallel with our new EPA grant mentioned above. This support will include myself and research students (undergraduate and graduate) to assist in setting up air monitoring equipment, collecting samples, chemical analyses in our laboratory at NAU, interpretation of the results, writing reports to be provided to the Cocopah Tribe and EPA, and dissemination of the results to the Cocopah community. We also pledge to work with you on any additional projects or proposals that would be helpful to the Cocopah.

Sincerely,



Jani C. Ingram, PhD
Regents' Professor of Chemistry and Biochemistry

Establishing Long Term Air Quality Monitoring Capacity at the Cocopah Indian Tribe

Cocopah Indian Tribe

14515 S. Veterans Drive
Somerton, AZ 85350

Jen Alspach

Cocopah Environmental Director
928-627-2025
alspachj@cocopah.com
DUNS: 074489527

Tribal Set-Aside

Project Partners:

Northern Arizona University
Jani Ingram

Institute of Tribal Environmental Professionals
Mansel Nelson

Project Location:

Cocopah Indian Reservation
Somerton, AZ 85350

Air Pollutant Scope:

PM 2.5, PM 10, VOCs

Budget Summary

EPA Funding Requested	Total Project Cost
\$185,029	\$248,289

Project Period:

November 1, 2022-October 31, 2024

Project Description:

This project will establish long term air quality monitoring capacity at the Cocopah Indian Tribe through the deployment of air monitors, data collection and analysis, staff training, and community outreach.

II. Workplan

Section 1- Project Summary and Approach

A. Overall Project

This project aims to establish long term air quality monitoring capacity at the Cocopah Indian Tribe through the deployment of quantitative air monitors on the tribe's three reservations, training of tribal air quality program staff, data collection and analysis, and educational outreach with the tribal community. The pollutant scope of this project consists of Particulate Matter (PM) 2.5, PM 10, and volatile organic compound (VOC) monitoring. Due to the geographical location of the Cocopah Reservation, which is divided across three land masses and lies in the rural, agriculture hub of Yuma County and along the international border with Mexico, the tribe faces a variety of environmental exposures to airborne pollutants. The purchase and deployment of the PM and VOC monitors will enable the tribe to collect quantifiable air data to inform and protect their community, and is a critical step forward in ensuring capacity for long term air quality monitoring.

This project is part of a larger effort of the Cocopah Tribe to develop their air quality program. Related air quality program development activities are currently being conducted under the tribe's EPA General Assistance Program and through the tribe's environmental health research partnership with Northern Arizona University (NAU). In 2021, the Cocopah Tribe opened a new part-time air quality specialist position under the GAP grant. In Fiscal Years 2022 and 2023, the air quality specialist will be working on the development of the tribe's air quality program, which includes coordinating with EPA air quality staff, participating in training, completing a baseline air quality assessment, managing the tribe's air quality flag program, and developing a Quality Assurance Project Plan (QAPP) for air monitoring work at the tribe. The Cocopah Tribe established an environmental health research partnership with NAU in 2019. In the summer of 2021, NAU submitted a proposal in collaboration with the Cocopah Tribe to the EPA Children's Healthy Learning Environments in Low-Income and/or Minority Communities grant and was notified of their selection for funding in early 2022. This grant will support air and water monitoring at the Cocopah Head Start and Daycare facilities from 2022 through 2024, as well as educational outreach with the tribal community. The funding and activities under both the EPA GAP and Healthy Learning Environments grants will greatly complement the instrumentation purchase/deployment and staff training under the proposed project and advance the progress in program development made within the two years of the proposed project. Funding from these grants is being presented as cost shared where appropriate for this proposed project. The timing of the proposed project is ideal as the tribe will have the assistance of air quality experts at both NAU and the Institute for Tribal Environmental Professionals in the above mentioned related activities which coincide with the proposed project period.

The major goals of the proposed project are as follows:

1. Deployment of Air Monitors
 - BGI PQ200 samplers will be used to monitor both PM 2.5 and PM 10 at each of Cocopah's three reservations. The PQ200 samplers meet the requirements for ambient particulate sampling dictated by the EPA. The PQ200 sampling technology enables continuous (24 hour run) monitoring.

- Tisch Polyurethane Foam (PUF) samplers will be used to monitor VOCs at each of Cocopah's three reservations. These monitors meet the associated EPA sampling methods.
- 2. Training of Cocopah Environmental Protection Office (EPO) staff
 - The tribal air quality specialist and other EPO staff will be trained by NAU researchers in air data collection and by ITEP in air quality education throughout the project period.
- 3. Data Collection and Analysis
 - Cocopah EPO will coordinate with NAU's laboratories to establish data collection strategies and analyze air quality data
- 4. Educational Outreach with Cocopah Learning Facilities
 - NAU researchers and ITEP will provide training and air quality education to the tribe's Head Start and Daycare facility staff, in conjunction with the Healthy Learning Environments grant
- 5. Dissemination and Outreach with Tribal Community
 - Cocopah EPO will coordinate with NAU researchers and ITEP to share results with the tribal community through dissemination presentations and through educational videos posted on the tribe's Cocopah Now YouTube page
- 6. Performance and Financial Reporting
 - Cocopah EPO will complete all required performance and financial reporting including submission of deliverables for all above activities

B. Project Significance

The Cocopah (Kwapa) Indian Tribe, also known as "The River People," is one of two federally recognized tribal nations in Yuma County with over 1,000 enrolled members. The Cocopah Reservation is comprised of approximately 6,500 acres in three noncontiguous bodies of land known as the North, West, and East Reservations. These three reservations have approximately 1,200 inhabitants based on the 2020 U.S. Census data. The East and West Reservations are located on either side of Somerton, AZ and are approximately a 15-minute drive apart. The North Reservation is in the city of Yuma, AZ and is approximately a 25-minute drive from either the East or the West Reservations. Data from the 2020 U.S. Census demonstrated that the median household income was \$32,250 with 31.3% of the total population living below the poverty level, and an unemployment rate of 15.5%. Currently, there are 193 individuals over the age of 3 enrolled in schools on and off the reservation. The closest Indian Health Service (IHS) unit is located at the Ft. Yuma IHS clinic. In 2020, the American Lung Association gave Yuma County a score of "F" for ground ozone pollution and found 10% of the population had asthma, including 2% of pediatric cases. According to the Arizona Department of Environmental Quality (ADEQ), Yuma is a moderate nonattainment area for PM 10, with the concentration of PM 10 being frequently above federal standards. Sources of PM 10 pollution include unpaved farm roads, construction, windblown dust, and emissions from across the border.

The position of each of the three Cocopah reservations places the tribe at risk to additional environmental exposures compared to the inhabitants of Somerton and Yuma, Arizona. On the Cocopah's North Reservation, the Colorado River separates their land from the Mexican town of Los Algodones. Tribal residents and community members report weekly open pit burning that

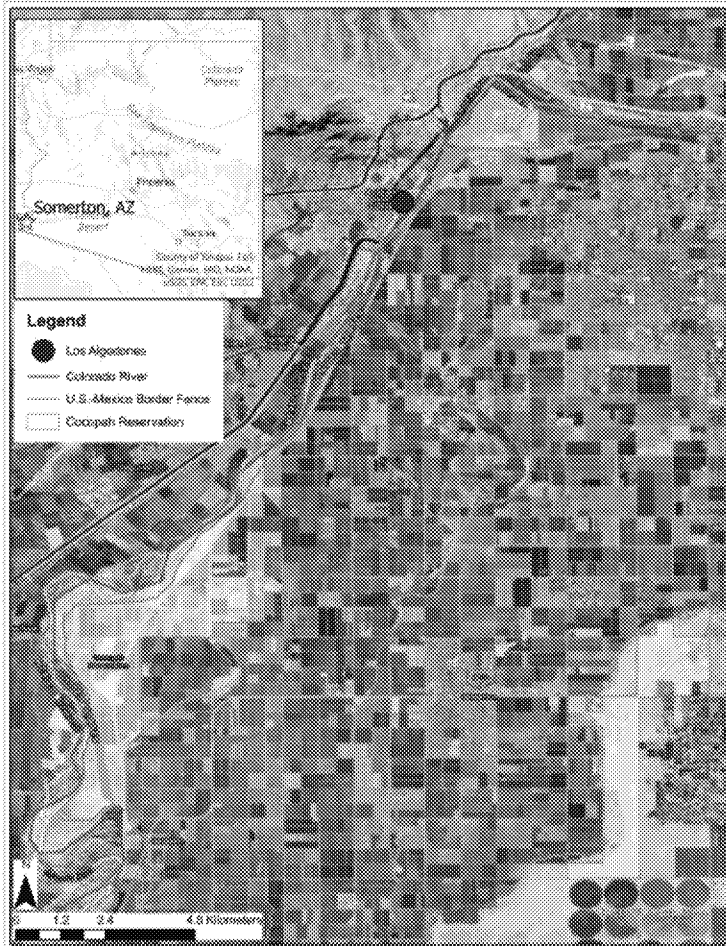


Figure 1. Map of Cocopah Indian Reservation in Yuma, County, Arizona. All three reservations outlined. Productive agricultural plots represented by green polygon.

produces large quantities of black smoke that drifts over the river into the tribal lands. In addition, soot from the unregulated waste burning settles on the land, homes, and vehicles. The Cocopah's West Reservation and East Reservation are surrounded by many highly productive agricultural plots. Throughout the year, aerial application of agrichemicals blows over the reservations, leaving sticky, pungent residues that residents report cause dizziness and headaches. There have also been complaints of dust from tilling operations in the fields lying north of the reservations. The West Reservation lies along the international border with Mexico below Morelos Dam, with the Colorado River becoming a dry river bed on tribal lands. This area of the West Reservation, which was once a rich riparian habitat, has transformed into a dry desert environment dominated by invasive vegetation including salt cedars, leaving the area vulnerable to wildfires. In addition, this area experiences diversion fires associated with illegal activity on the international border on a regular basis.

In 2020, the Cocopah Tribe signed a memorandum of understanding with NAU to establish a collaborative research partnership. The purpose of the Cocopah-NAU partnership is to investigate the risk of environmental exposures to the Cocopah people. Coordinating with the NAU researchers, it was decided the best approach was to gather baseline qualitative air data. In June 2021, qualitative air monitors (e.g., Purple Air II-SD [PA-II]) were deployed at Cocopah Tribal buildings on the West and North Reservations (e.g., the Cocopah Headquarters and the golf resort). PA-II sensors monitor ambient air for temperature, relative humidity, barometric pressure, and particulate matter (PM) 1, 2.5, and 10 microns. At the end of July 2021, data was downloaded from the air monitors. The 30-day qualitative monitoring demonstrated both reservations experienced two days each where the air quality index score exceeded 150, giving a score of "unhealthy." The days with "unhealthy" air quality varied between reservation testing sites, demonstrating that each reservation differs in air quality and possible air contamination profiles. In addition, the daily air quality index scores at the two tribal locations often differed from the air quality index available for the city of Yuma.

The culmination of various exposures to airborne pollutants, the diversity of air quality conditions experienced among the three reservations, and the difference in air quality experienced by the tribe as a whole in comparison to Yuma make it imperative that the tribe establish their own air quality monitoring capabilities across the three reservations to serve the residents in each community.

The tribal community will greatly benefit from the proposed project. The Cocopah Environmental Protection Office (EPO) staff will be trained by NAU researchers partnered with the NAU Institute for Tribal Environmental Professionals (ITEP) in air quality methods and field collection strategies. This training in combination with the purchase and deployment of the air monitors will allow for continued monitoring of airborne contaminants on tribal lands beyond the end of the proposed project period. In conjunction with the work under the EPA Healthy Learning Environments grant, ITEP will be providing training to the Cocopah Head Start and Day Care staff on air education. The Cocopah EPO will utilize the tribe's Cocopah Now YouTube platform to share air quality information and education with the tribal community to promote greater environmental health awareness. The Tribal Council will be provided with project updates throughout the project period. The Cocopah EPO and NAU researchers will share the air quality data to the community through dissemination presentations coordinated in conjunction with tribal community events. The project has additional benefits to the broader community as Cocopah is involved in the EPA Border 2025 program. Jen Alspach, Cocopah EPO Director, serves as a regional coordinator and will share information on the project at air quality meetings.

It is important to note that equipment purchase is not being supported by the other grants, and air monitoring activities would otherwise depend on the borrowing of equipment on a short term basis without the requested funding. In planning for the Healthy Learning Environments grant activities, the tribe reached out to the Tribal Air Monitoring Support (TAMS) Center to request to borrow the instruments included in this proposal. However, the TAMS Center was unable to fulfill the request. The Cocopah Tribe realized the need for the purchase of their own air monitors in order to establish long term air quality monitoring capacity at the tribe. Therefore, this project will be critical to ensure long term monitoring capacity extending beyond the proposed project period.

Section 2- Community Involvement

A. Community Partnerships

The Cocopah Indian Tribe will be working closely with NAU and ITEP on the proposed project. The EPA Healthy Learning Environments grant will be managed by Dr. Jani Ingram, professor and researcher in the NAU Department of Chemistry and Biochemistry. In conjunction with the Healthy Learning Environments grant, NAU will provide training to the Cocopah EPO on air quality methods and field collection strategies. NAU will visit Cocopah to help Cocopah EPO deploy the air monitors on the three reservations. NAU will assist Cocopah in data analysis and dissemination of results to the community. In conjunction with the Healthy Learning Environments grant, ITEP will be providing training and air quality education to the staff at Cocopah Head Start and Daycare. Cocopah EPO will be responsible for managing the proposed project including the performance and financial tracking and reporting requirements. Cocopah EPO will purchase all equipment and coordinate with NAU on the deployment of the monitors. The Cocopah environmental director and air quality specialist will be responsible for collecting the data, maintaining the instruments, and conducting necessary calibrations and quality assurance

measures. Cocopah EPO will share project updates and results to the Tribal Council and coordinate the community dissemination events. Cocopah EPO will also work with the Cocopah Public Relations team to share video updates and air quality education with the community.

Dr. Ingram has been at NAU since 2002 and her research focuses on investigating environmental contaminants with respect to their impact on health in at-risk populations. Her expertise in air sampling and analysis will be highly beneficial to the project. In addition, undergraduate and graduate students from her research lab will be trained in air sampling under the Healthy Learning Environments grant and will participate in the deployment of the air monitors at Cocopah.

Established in 1992, NAU ITEP is a resource for all 574 U.S. federally recognized tribes to promote the betterment of tribal health through training, dissemination, and surveillance. ITEP also has experience in broad dissemination to both communities and researchers across the globe as well as evaluation tools to assess the impact of their involvement. Their involvement in the project will help build upon previous lessons learned from other tribal communities and coordinated approaches to promote environmental health education at Cocopah.

Each partner will benefit from this project as the activities will build the relationship between the tribe and NAU, and open opportunities for continued collaborative research work. NAU undergraduate and graduate students will gain research experience and have the unique opportunity to work directly with a Native American community. Cocopah will benefit from the expertise and assistance of the NAU partners and project activities will significantly advance the tribe's air quality program and promote long term monitoring capabilities.

Cocopah's relationship with the NAU partners will sustain beyond the proposed project period as the tribe has already built a strong working relationship with NAU through the established environmental health research partnership and the Memorandum of Understanding (MOU) for continued environmental sampling. During the project period, Cocopah will seek additional funding opportunities to maintain and expand the monitoring program with the support of NAU to enable the research work to continue long term.

B. Community Engagement

The proposed project will engage local community members through training and education. Staff at the Cocopah Head Start and Daycare facilities will be trained and provided air quality education from NAU ITEP. The goal of this education is to promote environmental health awareness within the learning facilities at the tribe. This work will be conducted in conjunction with NAU's EPA Healthy Learning Environments grant. In addition, Cocopah EPO will provide educational outreach to the tribal community at community events and through educational videos posted on the tribe's Cocopah Now YouTube page. Within the project period, six educational videos will be created and shared on air quality and the project activities. These videos will be created starting at the deployment of the air monitors in quarter two of the project period. Project updates and results will be shared throughout the project period with the Tribal Council.

Section 3- Environmental Justice and Underserved Communities

Due to the geographical location, the tribe faces extensive airborne pollutant exposures from its proximity to agricultural fields and associated pesticide applications and windblown dust, the international border and unregulated burning of electronic waste, as well as the wildfires along the border. The tribal community experiences disproportionate health and economic challenges. The rate of asthma within the tribal community is significantly higher in comparison to the national average. Data from the 2020 U.S. Census demonstrated that the median household income was \$32,250 with 31.3% of the total population living below the poverty level, and an unemployment rate of 15.5%. Small tribes like Cocopah face challenges securing funding opportunities and are often overlooked by non-tribal researchers due to both real and perceived challenges of engaging in research work with a tribal community. The proposed project greatly promotes environmental justice by responding to a strong need for air quality monitoring for a tribal community that faces diverse exposures both within its reservation boundaries and in comparison to neighboring communities (Yuma County) that have available air quality information. The project will also involve communication and engagement with the tribal community. The tribal Head Start and Daycare staff will receive training and air quality education to promote environmental health awareness in their facilities. Cocopah EPO will also utilize the tribe's social media including the Cocopah Now YouTube page to create and share video updates and air quality education with the community. Overall, the project will empower the Cocopah Tribe to identify, monitor, and address environmental health issues through the experience of acquiring the instrumentation, staff training, and community engagement required to do so.

Section 4- Environmental Results- Outcomes, Outputs and Performance Measures

A. Expected Project Outputs and Outcomes

The project outputs and associated outcomes are as follows:

1. Deployment of instrumentation- Resulting in long term air quality monitoring capacity: one PM 10, one PM 2.5 (BGI PQ200 samplers), and one VOC (Tisch PUF sampler) monitor will be deployed on each of Cocopah's three reservations. The purchase and deployment of this instrumentation is central to this project and will enable long term air quality monitoring capacity at the tribe. A summary report following successful deployment will be submitted to the EPA as a deliverable.

2. Training of Cocopah EPO staff/Air Quality Specialist- Resulting in increased program capacity and quality assurance in data collection: The Cocopah air quality specialist and other EPO staff will be trained by NAU in the deployment and data collection strategies. Training will ensure quality assurance and increase capacity for long term program development. Training update reports will be submitted to the EPA as a deliverable.

3. Data collection and analysis- Resulting in expanded air quality surveillance and public health information: The Cocopah EPO will coordinate with NAU environmental chemistry laboratory on the analysis of air data collected at Cocopah. The data collection and analysis will enable enhanced access to air quality and public health information for the tribal community. Results will be submitted to the EPA on a quarterly or annual basis as recommended by EPA.

4. Educational Outreach with Cocopah Head Start and Daycare staff- Resulting in increased environmental health awareness in learning facilities: NAU ITEP will provide training and air quality education to the Cocopah Head Start and Daycare staff. The educational outreach

will increase environmental health awareness in tribal learning facilities. A summary report and copies of the outreach materials will be submitted to the EPA as deliverables.

5. Dissemination and Project Outreach with the tribal community- Resulting in enhanced community awareness of environmental health: The Cocopah EPO will coordinate with its NAU partners to share project updates and results with the tribal community through dissemination presentations during community events, updates to Tribal Council, and a total of 6 educational videos shared on the tribe's Cocopah Now YouTube page. The outreach activities will enable enhanced community awareness of environmental health. A summary report of outreach activities, including copies of outreach materials and links to YouTube videos, will be submitted to the EPA as a deliverable.

6. Performance and Financial Reporting- Resulting in increased program capacity for performance and financial tracking: The Cocopah EPO will document progress in performance and financial reports. This tracking will benefit the tribe's capacity for future air quality program reporting. Performance and financial reports will be submitted on a quarterly/annual basis as required by the EPA.

B. Performance Measure and Plan

Performance will be measured according to the major goals and progress towards completing the deliverables noted above. Each of the above expected outputs represents a core goal of the project. Performance will be continuously monitored to ensure that these goals are being met in reasonable time according to the timeline below. Cocopah EPO will have monthly calls with the NAU partners to review action items and resolve any issues in a timely manner. Progress will be tracked in quarterly performance reports submitted to the EPA. Results of the project will be evaluated according to the quantity and quality of data collection throughout the project period, as well as the impact of outreach activities. Outreach will be evaluated on the number of tribal members that participated and on the audience reach (views) of YouTube videos.

C. Timeline and milestones

The table below shows the project timeline with milestone completions by quarter. The Cocopah EPO will begin purchasing the air monitors in Quarter 1, with deployment being completed in Quarter 2. Training of EPO staff will begin in Quarter 1 and continue for the first year. Data collection and analysis will begin as soon as the monitors are deployed and continue for the project period. Educational outreach with the Cocopah learning facility staff and community members will commence with the deployment of the air monitors. Performance and financial tracking and reporting will take place on a quarterly basis.

Project Timeline	Collaborators	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Deployment of air monitors	JA, JI		X						
Training of Cocopah EPO Staff	JA, JI	X	X	X	X				
Data Collection and Analysis	JA, JI		X	X	X	X	X	X	X

Educational Outreach with Cocopah Head Start and Daycare	JA, ITEP, JI			X	X	X	X	X	X
Dissemination and Outreach with Tribal Community	JA, JI, ITEP			X	X	X	X	X	X
Performance and Financial Reporting	JA	X	X	X	X	X	X	X	X

Collaborators: Cocopah Environmental Protection Office/Jen Alspach (JA); NAU/Jani Ingram (JI); Institute for Tribal Environmental Professionals (ITEP)

Section 5- Quality Assurance Statement

Please see attached Quality Assurance Statement.

Section 6- Programmatic Capability and Past Performance

A. Past Performance

Grant #1: EPA General Assistance Program \$35,827; 10/1/2020-9/30/2021

Jen Alspach successfully managed this grant, which included environmental capacity building, solid waste management, and air quality program development. All quarterly and annual performance and financial reporting was completed on time. Alspach participated in an advance monitoring review which found that the grant was being managed successfully.

Grant #2: EPA CWA Water Pollution Control Grant \$60,000; 7/1/2020-6/30/2021

Jen Alspach successfully managed this grant, which included surface and ground water quality monitoring on the tribe's North Reservation. All quarterly and annual performance and financial reporting was completed on time.

Grant #3: EPA CWA Nonpoint Source Grant \$30,000; 7/1/2020-6/30/2021

Jen Alspach successfully managed this grant, which included watershed protection activities involving invasive vegetation removal and revegetation of native plants along the Colorado River. All quarterly and annual performance and financial reporting was completed on time.

Grant #4: EPA Performance Partnership Grant (Pesticides) \$56,867; 10/1/2020-9/30/2021

Jen Alspach successfully managed this grant, under which the tribe's pesticide officer completed pesticide monitoring and regulatory activities. All quarterly and annual performance and financial reporting was completed on time.

B. Reporting Requirements

All reporting requirements were submitted on time for the above grants, including performance and financial reports on both a quarterly and end of year basis.

C. Staff Expertise

The Cocopah Environmental Protection Office currently manages nine federal and non-federal grants which support the tribe's environmental programs in ecological restoration, water quality, air quality program development, and pesticide regulation. The project manager holds a master's degree in atmospheric sciences and has successfully obtained numerous funding opportunities to advance the tribe's environmental programs.

Section 7- Budget

Budget Detail

Personnel

Tribal Air Quality Specialist \$35,360/year, 1.0 FTE/year, \$70,720 total

The Tribal Air Quality Specialist will work directly in all phases of the project and be responsible for data collection and instrumentation maintenance. The air quality specialist will work with the EPO Director to plan and coordination training, outreach, and education events. 50% of the air quality specialist's salary will be supported by the tribe's GAP grant and NAU's EPA Healthy Learning Environments grant.

Fringe Benefits

Fringe Benefits for the Air Quality Specialist \$17,000/year, \$34,000 total

The fringe rate is 48% and covers health insurance, life insurance, FICA, SUTA, and worker's compensation. 50% of the air quality specialist's fringe benefits will be supported by the tribe's GAP grant and NAU's EPA Healthy Learning Environments grant.

Equipment

3 BGI PQ200 PM 2.5 Monitors, \$13,125/unit, \$39,375 total

One PM 2.5 monitor will be deployed at each of the tribe's three reservations.

3 BGI PQ200 PM 10 Monitors, \$12,625/unit, \$37,875 total

One PM 10 monitor will be deployed at each of the tribe's three reservations.

3 Tisch PUF Sampler 1000D-B, \$6,766/unit, \$27,064 total

One PUF sampler will be deployed at each of the tribe's three reservations for VOC monitoring.

Freight for BGI PQ200 Units, \$600 total

Quoted freight costs for delivery of BGI PQ200 units.

Shipping for PUF samplers, \$975

Quoted shipping costs for delivery of PUF units.

Supplies

Laptop, \$2,300 total

Laptop for air quality specialist's data collection and analysis and educational outreach activities.

PM monitor accessories and maintenance items, \$2500/unit, \$15,000 total

Items including pump rebuild kits, clock battery, cassette carriers, cooling fans, etc. that will be needed in the two year of the project period. According to the BGI PQ200 manual, it is recommended that the pump be rebuilt after 8000 hours of use. With a continuous monitoring plan, the pump will need to be rebuilt twice within the project period. The pump rebuilt kit was quoted at \$1,090 per kit.

VOC monitor accessories and maintenance items, \$1,200/unit, \$3,600 total

Items including gaskets, power cords, motor brushes, replacement motors, etc. According to the PUF sampler manual, motor brushes may need to be replaced every 500 hours.

General supplies, \$1,000

Items include tools, a ladder, and office supplies for use by the air quality specialist.

Instrumental Analysis Supplies, \$3,600 total

Items include filters and laboratory supplies. These supplies will be funded under NAU's EPA Healthy Learning Environments grant

Other

Gas, \$120/month, \$2,880 total

Regular unleaded gas for the air quality specialist's vehicle. Specialist will frequently transport between the three reservations.

Printing of outreach materials, \$3500 total

Printing of educational outreach materials to share with the community. \$1500 is being covered by NAU's EPA Healthy Learning Environments grant.

Laboratory Analysis, \$5,800

Air data laboratory analysis. This cost is being covered by NAU's EPA Healthy Learning Environments grant.

Total Requested Funds: \$185,029

Leveraged Funds: \$63,260

Total Project Cost: \$248,289

Budget Table

Line Item & Itemized Cost	EPA Requested Funding	Cost Share¹
Personnel		
Tribal Air Quality Specialist @ \$17/hr x 20 hrs/wk x 104 wks	\$35,360	\$35,360
TOTAL PERSONNEL	\$35,360	\$35,360
Fringe Benefits		
Fringe Benefits	\$17,000	\$17,000

48% of Salary @ 0.5 FTE/yr Medical, Dental, FICA, SUTA		
TOTAL FRINGE	\$17,000	\$17,000
Equipment		
3 BGI PQ200 PM 2.5 Monitors @ \$13,125/unit	\$39,375	
3 BGI PQ200 PM 10 Monitors @ \$12,625/unit	\$37,875	
Freight for BGI PQ200 units	\$600	
3 Tisch PUF Sampler 1000D- B @ \$6766/unit	\$27,064	
Shipping for PUF Samplers	\$975	
TOTAL EQUIPMENT	\$105,889	
Supplies		
Laptop for air quality specialist	\$2,300	
PM Monitor accessories and maintenance items @ \$2500/unit	\$15,000	
VOC Monitor accessories and maintenance items @ \$1200/unit	\$3,600	
General supplies (tools, ladder, office supplies, etc.)	\$1,000	
Instrumental Analysis Supplies		\$3,600
TOTAL SUPPLIES	\$21,900	
Other		
Gas for air quality specialist vehicle @ \$120/month	\$2,880	
Printing of outreach materials	\$2,000	\$1,500
Laboratory Analysis		\$5,800
TOTAL OTHER	\$4,880	
TOTAL FUNDING	\$185,029	\$63,260
TOTAL PROJECT COST	\$248,289	

¹Cost share is being supported by the tribe's GAP grant and NAU's EPA Healthy Learning Environments grant.

Section 8- Optional Attachments

1. Partnership letters: Attached
2. Resumes of the project manager and other key personnel: attached